ARTICLE IN PRESS

COMPUTER LAW & SECURITY REVIEW ■■ (2017) ■■–■■

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Computer Law & Security Review

Online price discrimination and personal data: A General Data Protection Regulation perspective

Richard Steppe *

Research Foundation Flanders – KU Leuven, Faculty of Law, Institute for Consumer, Competition & Market, Belgium

Keywords:
Online price discrimination
Data processing
Big data
General Data Protection Regulation (GDPR)

A B S T R A C T

The General Data Protection Regulation (GDPR) contains various provisions with relevance to online price discrimination. This article, which analyses a number of essential elements on this junction, aims to provide a theory on whether, and, if so, how the GDPR affects price discrimination based on the processing of personal data. First, the contribution clarifies the concept of price discrimination, as well as its typology and relevance for big data settings. Subsequent to studying this topic in the context of the Commission's Digital Single Market strategy, the article tests the applicability of the GDPR to online price personalisation practices by applying criteria as 'personal data' and 'automated processing' to several discriminatory pricing cases and examples. Secondly, the contribution evaluates the possible lawfulness of price personalisation under the GDPR on the basis of consent, the necessity for pre-contractual or contractual measures, and the data controller's legitimate interests. The paper concludes by providing a *capita selecta* of rights and obligations pertinent to online discriminatory pricing, such as transparency obligations and the right to access, as well as the right to rectify the data on which price discrimination is based, and the right not to be subject to certain discriminatory pricing decisions.

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> *"A key step is to avoid average pricing. Pricing to specific customer groups should reflect the true competitive value of what is being provided. When this is achieved, no money is left on the table unnecessarily on the one hand, while no opportunities are opened for competitors through inadvertent overpricing on the other. Pricing is an accurate and confident action that takes full advantage of the combination of customers' price sensitivity and alternative suppliers they have or could have."* [1]

* Research Foundation Flanders (FWO–Aspirant); KU Leuven, Faculty of Law, Department of Economic Law (Institute for Consumer, Competition & Market), Tiensestraat 41, box 3425, Leuven 3000, Belgium.
E-mail address: richard.steppe@kuleuven.be.

[1] Anthony Miles, *Perspectives on marketing series – Pricing* (Boston Consulting Group 1986), as cited in Hal Varian, 'Price Discrimination' in Richard Schmalensee and Robert Willig (eds), *Handbook of industrial organization – Volume I* (Elsevier 1989) 597, 598.

http://dx.doi.org/10.1016/j.clsr.2017.05.008
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Please cite this article in press as: Richard Steppe, Online price discrimination and personal data: A General Data Protection Regulation perspective, Computer Law & Security Review: The International Journal of Technology Law and Practice (2017), doi: 10.1016/j.clsr.2017.05.008

1. Price discrimination – conceptual remarks[2]

Price levels for consumer products diverge extensively within the European Union and beyond: firms may award quantity or loyalty rebates to their purchasers and student discounts to youth, identical drugs may cost more in Belgium than in Greece, and prices of airplane tickets rapidly change. Furthermore, Uber introduced a *'surge pricing'* system through which cab rates increase according to local demand, manufacturers bundle goods for lower prices than the sum of the parts, electricity costs may be significantly lower during off-peak periods, and bars practice *happy hours*. These examples share the same phenomenon, in which the same provider sells identical products for different prices and such differences are not motivated by different cost structures (e.g. different costs of supply). This phenomenon is called price discrimination.[3] Price discrimination likewise encompasses the reverse situation, with all buyers being charged the *same* price in spite of an existing difference in costs.[4]

The commonly-used definitions of 'discrimination', such as "the unjustified different treatment of comparable situations"[5] or "the practice of treating somebody or a particular group in society less fairly than others"[6], reveal an inherently negative connotation. It does hence not surprise that price discrimination, too, is oftentimes perceived unfavourably by the public (a US survey e.g. indicated that US adults "overwhelmingly object to most forms of behavioral targeting and [consider] all forms of price discrimination as ethically wrong").[7] However, whereas the word 'discrimination' traditionally bears a negative connotation, the term 'price discrimination' should be read neutrally as it constitutes a fundamental concept in economic theory.[8] Additionally, discriminatory prices may well aid in treating 'comparable situations' in a comparable manner (should e.g. loyal customers, both online and offline, be served in the same manner as sporadic purchasers?) and, dependent on the case, prove beneficial for both providers and society at large. The benefits of price discrimination are nonetheless contentious, with even European institutions seemingly differing in opinions on its advantages.[9] Price discrimination is, however, no new technique and hence its conditions, types, profitability aspects, consumer surplus, and social welfare effects have been thoroughly studied from an economic perspective.[10] Economists traditionally distinguish three categories: (1) first-degree price discrimination, meaning each individual consumer is charged the maximum he or she is willing to pay for the product[11] (i.e. 'perfect' price discrimination[12], the

[2] This contribution has been written in the framework of the author's Ph.D. research on price discrimination in EU law *sensu lato*, in which the ensemble of rights and obligations with regard to price discrimination is analyzed. This article is an adapted and translated version of an earlier published contribution, see R. Steppe, 'Prijsdiscriminatie in het digitale tijdperk: beschouwingen over de nieuwe Algemene Verordening Gegevensbescherming' in Matthias Storme and Frederic Helsen (eds), *Innovatie en disruptie in het economisch recht* (Intersentia 2017) 105–149.

[3] Price discrimination may also be defined as "the sale of two or more similar goods at prices which are in different ratios to marginal cost". See George Stigler, *The Theory of Price* (Collier-Macmillan 1968) 209. See also Neil Dorward, *The pricing decision: economic theory and business practice* (Harper & Row 1987) 136.

[4] Catarina Vieira Peres, 'Price discrimination – The airports case' in Luís Ortiz Blanco (ed), *Derecho de la Competencia Europeo y Español. Volumen IX* (Editorial Dykinson 2009) 279, 284.

[5] This is the definition of *formal* discrimination. As stated by Wouters: "the prohibition of discrimination [. . .] is merely a specific enunciation of the general principle of equality which is one of the fundamental principles of Community law". This principle requires that similar situations shall not be treated differently unless differentiation is objectively justified. See Jan Wouters, "Constitutional Limits of Differentiation: the Principle of Equality" in Bruno De Witte, Dominik Hanf and Ellen Vos (eds), *The many faces of differentiation in EU law* (Intersentia 2001) 301, 304 and 313.

[6] Oxford Advanced Learner's Dictionary, 'Discrimination' <http://www.oxfordlearnersdictionaries.com/definition/english/discrimination?q=discrimination> accessed 8 April 2017.

[7] See Joseph Turow, Lauren Feldman and Kimberly Meltzer, *Open to Exploitation: America's Shoppers Online and Offline* (Annenberg Public Policy Center of the University of Pennsylvania Reports 2005) 4 <http://repository.upenn.edu/asc_papers/35> accessed 8 April 2017.

[8] Ivan Png, *Managerial economics* (Routledge 2012) 173–174; Aniko Hannak, Gary Soeller, David Lazer, Alan Mislove and Christo Wilson, 'Measuring Price Discrimination and Steering on E-commerce Web Sites' in Internet Measurement Conference, *IMC '14: Proceedings of the 2014 Conference on Internet Measurement* (ACM 2014) 305, 307.

[9] The Committee of Ministers of the Council of Europe, for instance, believes that "profiling may be in the legitimate interests of both the person who uses it and the person to whom it is applied, such as by leading to better market segmentation [. . .] or adapting offers to meet demand by the provision of better services [. . .] and may thus provide benefits for users, the economy and society at large", whereas the European Data Protection Supervisor has mentioned that price discrimination equates to misusing an imbalance of power and "enables companies to offer goods or services at different prices to different people, in an effort to extract the maximum price that each consumer is willing to pay". See resp. Committee of Ministers of the Council of Europe, *The protection of individuals with regard to automatic processing of personal data in the context of profiling* (Recommendation No. CM/Rec(2010)13, 23 November 2010) 6 <www.coe.int/t/dghl/standardsetting/cdcj/CDCJ%20Recommendations/CMRec(2010)13E_Profiling.pdf> accessed 8 April 2017; European Data Protection Supervisor, *Meeting the challenges of big data: A call for transparency, user control, data protection by design and accountability* (Opinion No. 7/2015, 19 November 2015) 19 <https://secure.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/Consultation/Opinions/2015/15-11-19_Big_Data_EN.pdf> accessed 8 April 2017.

[10] See notably Arthur Pigou, *The Economics of Welfare* (Macmillan & Co. 1960) xxxi + 876 p.; Joan Robinson, *The economics of imperfect competition* (Macmillan & Co. 1969) xx + 352 p.; Louis Phlips, *The economics of price discrimination* (Cambridge University Press 1983) xiii + 284 p.; Jean Tirole, *The Theory of Industrial Organization* (MIT Press 1988) xii + 479 p.; Hal Varian, 'Price Discrimination' in Richard Schmalensee and Robert Willig (eds), *Handbook of industrial organization – Volume I* (Elsevier 1989) 597–654; Lars A. Stole, 'Price Discrimination and Competition' in Mark Armstrong and Robert Porter (eds), *Handbook of industrial organization – Volume 3* (Elsevier 2007) 2221–2299.

[11] I.e. the consumer's reservation price. See Arthur Pigou, *The Economics of Welfare* (Macmillan 1960) 279; Daniel Gifford and Robert Kudrle, 'The Law and Economics of Price Discrimination in Modern Economies: Time for Reconciliation?' (2010) 43 UC Davis Law Review 1235, 1241.

[12] Robert Ekelund, 'Price Discrimination and Product Differentiation in Economic Theory: An Early Analysis' (1970) 84(2) The Quarterly Journal of Economics 268, 270; Hal Varian, 'Price Discrimination' in Richard Schmalensee and Robert Willig (eds), *Handbook of industrial organization – Volume I* (Elsevier 1989) 597, 601.

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